

REMARKS

Claims 1-4, 7, 8, and 10-15 are pending in this application. By this Amendment, the specification is amended, claims 1, 2, 10, 13, and 14 are amended, and claims 5, 6, and 9 are canceled. Support for the amendments to the claims may be found, for example, in original claims 5, 6, and 9 and page 3, lines 7-16, page 14, lines 5-14, and page 18, line 17, to page 19, line 25, of the present specification. No new matter is added. In view of at least the foregoing amendments and the following remarks, reconsideration and allowance are respectfully requested.

I. Allowable Subject Matter

Applicants thank the Examiner for indicating that claim 12 contains allowable subject matter.

II. Objection to the Specification

The Office Action objects to the specification. By this Amendment, the Abstract is amended to address the Examiner's concerns. Applicants note that the subject matter of claim 9 that is incorporated into claim 2 is amended in view of the Examiner's comments. Reconsideration and withdrawal of the objection are respectfully requested.

III. Claim Objection

The Office Action objects to claims 9. By this Amendment, claim 9 is canceled, rendering its objection moot. Reconsideration and withdrawal of the objection are respectfully requested.

IV. Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1-11, 13 and 15 under 35 U.S.C. §102(b) as allegedly being anticipated by Silva (U.S. Patent No. 4,606,319, hereinafter "Silva"); and rejects claims 1, 2, 5, 6, 13, and 15 under 35 U.S.C. §102(b) as allegedly being anticipated by Hirota et al. (U.S. Patent No. 5,189,876, hereinafter "Hirota"). By this Amendment, claims 5, 6, and 9 are

canceled, rendering their rejection moot. As for the remaining claims, Applicants respectfully traverse the rejections.

By this Amendment, claims 1 and 2 are amended to more clearly distinguish over the applied reference. Specifically, claim 1 is amended to recite "applying a heat operation to the fractionation passage by utilizing exhaust heat wasted from the internal combustion engine from the operation for promoting the fractionation of the fuel; and adjusting a temperature of the branch point of the fractionation passage so that the temperature of the branch point of the fractionation passage is maintained at a predetermined target temperature." Furthermore, claim 2 is amended to recite "a temperature detecting device for detecting a temperature of the branch point; a temperature adjusting device adapted for adjusting the temperature of the branch point; and a temperature control device for controlling an operation of the temperature adjusting device based on the temperature detected by the temperature detecting device such that the temperature of the branch point is maintained at a predetermined target temperature; wherein the fractionation section extends through an area to which a heating operation is applied due to a heat wasted from the internal combustion engine as the fractionation promoting operation, and an exhaust heat of the internal combustion engine is utilized as the heat wasted from the internal combustion engine." The applied references fail to disclose, either expressly or inherently, the above combination of features of independent claims 1 and 2.

The Office Action asserts that Silva discloses the claimed temperature control device (previously recited in canceled claim 9) that is now recited in claim 2 (and similarly recited in independent claim 1), citing column 9, lines 3-18, of Silva. *See* page 5 of the Office Action. However, column 9, lines 3-18, of Silva states:

The thermal switch 17 closes only when there is sufficient heat being supplied to the vaporizing tube 6 as measured by the temperature of the tube 6. ...With the switches 17, 51 and 21 all closed, electrical current is transmitted

to the valves 19, 9 and to the fuel pump 4 to open the valves and turn on the fuel pump. The vaporizing tube 6 then becomes operational and liquid fuel is introduced thereinto. If any of the switches 17, 51 and 21 open, then the circuit is open in the wiring harness, and the valves 19 and 9 close, while the fuel pump 4 turns off.

Based on the above section of Silva, one of ordinary skill in the art would clearly recognize that the temperature of the branch point is not detected in Silva. Furthermore, a thermal switch is a switch that changes states to either an open or closed state, when it reaches preset temperature. Therefore, the thermal switch is maintained at a closed state, when there is sufficient heat being supplied to vaporizing tube 6, based on the measurement of the temperature of vaporizing tube 6. Thus, in Silva, the temperature of a branch point is not controlled. Accordingly, thermal switch 17 does not adjust the temperature of the branch point so that the temperature of the branch point is maintained at a predetermined target temperature, contrary to claims 1 and 2.

Similarly, Hirota does not disclose, either expressly or inherently, "adjusting a temperature of the branch point so that the temperature of the branch point is maintained at a predetermined target temperature" or "a temperature adjusting device capable of adjusting the temperature of the branch point; and a temperature control device for controlling an operation of the temperature adjusting device based on the temperature detected by the temperature detecting device such that the temperature of the branch point is maintained at a predetermined target temperature" (as recited in independent claims 1 and 2, respectively).

For at least these reasons, Applicants submit that the applied references fail to disclose, either expressly or inherently, each and every element of independent claims 1 and 2 (from which claims 2-11, 13, and 15 depend), as required for anticipation under 35 U.S.C. §102(b). Thus, the applied references do not anticipate the claimed invention. Reconsideration and withdrawal of the rejections are respectfully requested.

V. Rejection Under 35 U.S.C. §103

The Office Action rejects claim 14 under 35 U.S.C. §103(a) as allegedly being unpatentable over Silva or Hirota. Applicants respectfully traverse the rejection.

For the reasons set forth above, Applicants submit that Silva and Hirota fail to disclose and likewise fail to teach, suggest, or establish any reason or rationale to provide the combination of features recited in independent claim 2, from which claim 14 depends. Therefore, Applicants submit that claim 14 is patentable because claim 14 would not have been rendered obvious by the applied references.

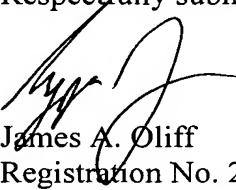
Reconsideration and withdrawal of the rejection are respectfully requested.

VI. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Amended Abstract

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